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Taxonomic re-evaluation of Chinese Bradybaeninae with descriptions of four new genera, three new combinations and fiftteen new species, and comments on co-authorship ethics and taxonomic practice (Gastropoda: Camaenidae)

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Abstract: Ms. Zhang has published more than 20 taxonomy-related journal articles as the first author between 2019 and 2026, four of which involve evaluations of other scholars' research. Reasonable and well-intentioned comments and studies contribute to the sound development of taxonomy. However, we have serious concerns about the content of her papers. We question the authenticity of the research results in some of her publications, as well as whether she has respected her co-authors and properly used materials provided by other co-authors in drafting and submitting her papers. As one of her former co-authors and the first author of this paper, we discovered that in Zhang *et al.* 2024a, the samples provided by us were misused without proper communication, and we were not informed of the specific content of the paper during the entire process from submission to publication. Meanwhile, we consulted the second author of Zhang *et al.* 2024a, who was largely unaware of the specific content of the paper. Whether an academic paper can be published without the knowledge of its co-authors is thought-provoking, and whether this practice complies with academic ethics also warrants further discussion. Besides, the names of its co-authors were also misspelled, and Ms. Zhang has not issued any public apology statement. We have re-examined some of her taxonomic articles and revised the conclusions of several papers. In this study, we describe four new genera, three new combinations and fifteen new species of Camaenidae from China.

Keywords: academic ethics, academic issues, mollusca, taxonomy, taxonomic revision, new species

对中国巴蜗牛亚科分类学的重新评估，包括描述四个新属，三个新组合和十五个新物种，并就合著伦理与分类学实践发表评述（腹足纲：坚螺科）

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摘要：张女士在 2019 到 2026 期间以论文第一作者的身份发表了超过 20 篇分类学相关的期刊文章，其中 4 篇涉及对其他学者的研究评价，合理而善意的评价与研究有助于分类学良好发展，然而我们对其论文内容感到严重担忧。对其一些论文研究结果的真实性，以及是否尊重合著者并正确使用其他合著者提供材料进行论文撰写与提交的情况提出质疑。在本文第一作者作为其曾经的合著者之一，发现在 Zhang *et al.* 2024a 中，本文合著者提供的样本在未经过合理沟通的情况下被私自错误使用，并且在论文投稿至见刊期间没有被告知文章具体内容。同时我们咨询了 *Zhang et al.* 2024a 中的第二作者，其对文章的具体内容几乎处于不知情的情况，一篇学术论文能否在共著者不知情的情况下发表引人深思，这是否符合学术规范也值得探讨。除此之外，其合著者的姓名也被写错，并且张女士没有发表任何公开声明道歉。我们重审了其部分分类学文章，对一些错误的结论进行了重新修订。同时，在这项研究中，我们描述了来自中国的巴蜗牛科的四个新属,十五个新种和三个新组合。

关键词：学术道德，学术问题，软体动物，分类学，分类修订，新种

Introduction

Ms. Zhang has published more than 20 taxonomic journal articles as the first author between 2019 and 2026, making certain contributions to malacological taxonomy. However, the conclusions and academic ethics in some of her papers are concerning. We hereby raise corresponding questions regarding the issues identified in several of these articles.

In terms of academic ethics:

In Zhang *et al.* 2024a, a new snail species *Pseudiberus shanheicus* G. Zhang, Z. Liu, Q. Feng & Q. Zhang, 2024, from Henan Province, China, was described. Although this paper represents a generally well-written species description, I have identified several issues that require attention.

1. The name of one co-author was misspelled: ‘Qaunyu Zhang’ should be ‘Quanyu Zhang’. Up to now, I have not received any public apology (Such as Zhang 2024 or issue a public apology via email or social media accounts), nor has the error been corrected. When I questioned her about why she misspelled my name, she only briefly mentioned it in the WeChat chat software. She never brought up the matter again. Ms. Zhang frequently comments on the research of others (Zhang 2019; Zhang & Feng 2025; Zhang 2025; Zhang & Wu 2026) and often revises errors in her own publications (Zhang 2024). It is therefore unclear why she has failed to rectify this mistake or otherwise address the legitimate rights and interests of the affected co-author.

2. In the Type material section, the paper states that all material for the newly described species was provided by the second and fourth authors of the study. In reality, I supplied Ms. Zhang with *Pseudiberus* Ancey, 1887 specimens from multiple localities in both Shanxi and Henan provinces. The authors state that ‘Phenetic (or numerical taxonomic) methods, such as geometric morphometrics, failed to distinguish the species’. However, prior to submission, the first author did not consult me to verify photographs of *Pseudiberus* specimens from different localities. It is therefore unclear how she confirmed the geographic origin of the specimens listed in the Type material section. Furthermore, the additional specimens I provided from multiple localities were neither included in the paper nor explained as to their exclusion. These specimens were neither dissected nor subjected to DNA sequencing, but were instead selectively omitted. Whether this selective exclusion has affected the conclusions of the paper remains unknown.

3. I have contacted the second author of this paper and learned that neither the second nor the fourth author engaged in sufficient communication with the first author before submission. We were given no detailed information about the paper’s content, only informed that it would include a new species description. None of us saw the initial draft before publication. The identification of non-type-locality *Pseudiberus* specimens in this work was conducted without our consultation, and we were unaware of any conclusions beyond the description of the new species. It is deeply concerning how the first author was able to submit and publish this paper despite such a lack of participation

and awareness on the part of the second and fourth authors.

Where the funds went:

Zhang *et al.* 2024a state that 'This study is supported by the National Students' Innovation and Entrepreneurship Training Program (201910445019) and the Tony Whitten Award 2020.' However, the materials used in this paper were provided by the second and fourth authors, and the fieldwork was also conducted by these two authors. We have not received any portion of the funding. In addition, this article was published in a journal that does not charge publication fees, and only a very small number of individuals were sequenced for relevant sequences. Therefore, the effective use of these funds may be called into question, and clarifying the allocation and purpose of the funding would likely be more conducive to the healthy development of academic research. We also question why we, who conducted the fieldwork, did not receive any corresponding financial support. Furthermore, the first author never even discussed the funding with us.

As for the conclusions of the paper (Excluding the incorrect Latin spelling of the main studied snail genus in her papers, such as the miswriting of *Cathaica* as *Cathalca* in Figure 1 of Zhang & Wu 2026):

1. Zhang *et al.* 2024a: We do not accept the identity of the specimens from Henan Province identified as *P. chentingensis* (Yen, 1935) in Zhang *et al.* 2024a.First, the paper provides no anatomical or molecular data for populations near the type locality of this species.Second, as stated above, the origin of the specimens used by the first author is highly questionable. In addition, the correct identification of *P. shanheicus* from Xinxiang City is also doubtful, for the same reasons.

2. Zhang & Feng 2025: This paper employs extensive taxonomic and philosophical discussions to construct a seemingly reasonable framework, but is this really the case? From a philosophical perspective, this is not the responsibility of taxonomists. Therefore, great caution must be exercised when citing and discussing fields outside one's own specialization. For a philosophical issue, different scholars may hold different views, and it is not easy to determine which side is correct. For example, regarding the demarcation problem of science, some argue that falsifiability is the criterion for science Popper 1935, but many philosophers have opposed falsificationism, including Feyerabend 1975, Laudan 1983, Maxwell 1972 and Quine 1951, all of whom put forward different perspectives. Scholars engaged in natural sciences should not argue for their own views based solely on personal preferences without conducting sufficient philosophical discussions. Discussions on falsifiability also appear in this paper; however, the first author fails to present the viewpoints of other philosophers mentioned above. From some perspectives, the author has selected information that is favorable to themselves, attempting to make readers more likely to agree with their views. Therefore, in the absence of sufficient professional knowledge in other fields, such discussions should be reduced; otherwise, it may lead to misleading conclusions. In addition, we put forward our own views on the paper by Chen *et al.* 2025a, which are only personal opinions here. It is true that sometimes some new species are not placed in the correct genus, but this is sometimes unavoidable. Because in the absence of DNA evidence, it is sometimes difficult to determine their generic attribution based on anatomy and shell morphology, especially for researchers studying large taxa, who often find it hard to address all taxonomic issues at once. Particularly in some unexplored regions of China, there are a large number of undescribed new land snail species. Sometimes overly cumbersome procedures can seriously slow down the rate at which these species are described. In such cases, it is not inappropriate to temporarily place them in a relatively reasonable genus and sort out these paraphyletic groups through molecular phylogenetic trees in subsequent studies. In this paper, the authors wrote, "It is regrettable that recent efforts have, in some instances, regressed to pre-1900s practices by neglecting established phylogenetic methodologies." and "Failure to adhere to these standards risks perpetuating polyphyly in principle and impeding the progress of phylogenetic systematics." Is this an overstatement? Dr. Chen has conducted extensive research on land snails in dry-hot valleys in Sichuan, Gansu, Yunnan and other places in recent years (Chen *et al.* 2024ab, 2025ab), which undoubtedly has made certain contributions to the field of taxonomy. Was it somewhat hasty for Zhang & Feng 2025 to publish their paper less than a year after the publication of Chen *et al.* 2025a? For regions with high species diversity, it is excessively demanding to complete all the work at one time. Furthermore,

assigning species to their correct genera also relies on access to the type species of the respective genus, and obtaining specimens of target species is further constrained by factors such as the difficulty of field collection. A review of Chinese taxa published by Ms. Zhang as the first author in recent years reveals that the new species described in Zhang & Wang 2025 and Zhang *et al.* 2024a were not collected by Ms. Zhang herself, and a large number of new species specimens in Zhang & Wade 2023 were also collected by other researchers. This indicates that Ms. Zhang has insufficient fieldwork experience in China and lacks respect for field investigators (e.g., the second and fourth authors in Zhang *et al.* 2024a). Against this background, whether Ms. Zhang is qualified to put forward the requirements stated in the article is highly questionable, and whether it is reasonable for her to impose strict standards only on others is equally debatable.

3. Zhang *et al.* 2025, Zhang & Wang 2025: Based on the discussions in these two papers and the aforementioned content of this article, it seems that Ms. Zhang is eager to promote a land snail taxonomic system established by herself. Phylogenetic trees combining molecular and morphological data have indeed achieved good results in certain taxa; however, her discussion on anatomy other than genitals is relatively weak. For example, in some gastropod taxa, Radulae and stomach can also serve as references for distinguishing species (Liang *et al.* 2022). Are genitals really the optimal solution for the classification of these species? At present, some disciplines have fallen into the misunderstanding of excessive modelization (Lu 2026). Although the self-consistency of model assumptions, the rigor of the derivation process, and the degree of validity of conclusions within the model have been correspondingly guaranteed, it is easy to ignore important realistic backgrounds. It is worthy of in-depth consideration whether "mathematical rigor" and "practical relevance" have been well balanced. Taxonomists find it difficult to reach a consensus on the species concept, and their perspectives are inevitably influenced by their professional insights. The concept of population itself is also controversial (Zhang 2016). Therefore, it is hard for us to easily claim that the theoretical system of one or several scholars is superior to those of others.

Molluscan dissection presents another awkward predicament: it is far less intuitive than external shell morphology. Although shell form is often highly variable, is a framework constructed solely on genitalic anatomy truly superior to shell morphology? In certain taxa, reliance on genitalic dissection has even resulted in species being incorrectly assigned to families (Davis *et al.* 1985). Treatment of different taxonomic groups must therefore be cautious, rather than simply applying a uniform framework.

Furthermore, DNA is not merely abstract digital information; it is also a microscopic structure present within cells. Like genitalic characters, it lacks the intuitiveness of shell morphology, yet its reliability is distinctly higher than that of genitalic dissection. In some groups, species are distinguished by comparing base-pair differences in molecular barcodes (Zhang *et al.* 2024b).

In addition, when working with unfamiliar taxa, researchers may misestimate species diversity and distributional ranges, leading to the construction of flawed frameworks using sparse and incomplete data. For instance, in Zhang *et al.* 2024a, due to insufficient sampling experience and minimal communication with providers of foundational material for their study, their understanding of species diversity within the genus *Pseudiberus* is questionable. The reliability of conclusions drawn from limited and potentially erroneous data remains unclear.

4. Zhang & Wu 2026: I have consulted the first author of Wang *et al.* 2025, and there is an oversight in the upload of species molecular data—some species names were confused during the molecular data upload. PV446370 may actually represent a molecular fragment belonging to *Cathaica pyrrhozona*. This is a common mistake easily made by a young taxonomist. We do not agree with the taxonomic views in Zhang & Wu 2026. Although Ms. Zhang conducted relevant research on northern snails in Zhang & Wade 2023 and Zhang *et al.* 2024a, she may have underestimated the diversity and distribution areas of *Pseudiberus* and *Cathaica* Möllendorff, 1884 species. We have presented more surveyed areas and described more species in the following text, and do not agree with the taxonomic system she established based on data from fewer regions. I reiterate my view here: the handling of species in regions with high species diversity must be conducted with careful research, and the species classification framework of other regions cannot be simply applied. The "subjective presuppositions" in modeling tend to negate

the objectivity and autonomy of existence (Fraassen 2008; Bailer-Jones 1999). In addition to genitalia, the geographical distribution, living environment, living habits of species, as well as their practical research significance and social significance should all be comprehensively considered. Therefore, we have reinstated the species that were treated as synonyms of other species by Zhang & Wu 2026 in the following text. Furthermore, the paper claims to adopt a more comprehensive dataset. Nevertheless, supplementary materials of Zhang & Wade 2023 show that *Cathaica* species cannot be distinguished using ITS2 sequences, with the phylogenetic tree predominantly supported by 16S data. It remains unclear why the COI dataset was excluded from the 2026 study, which constitutes selective disregard of relevant genetic evidence.

5. Zhang 2019: In the absence of any morphological or molecular phylogenetic studies, is treating one species as a synonym of another inconsistent with the very principles advocated by Ms. Zhang in (Zhang & Feng 2025)? Furthermore, she has not subsequently demonstrated the same diligence as in her critiques of other scholars by actively supplementing anatomical or molecular evidence for these species.

Cathaica Möllendorff, 1884 was originally established based on shell morphology and is one of the most species-rich genera in the subfamily Bradybaeninae of the family Camaenidae (Wu 2024; Richardson 1983).

This study:

Although classification methods relying solely on shell morphology have been questioned by recent molecular studies, the present study — based on extensive field sampling (Beijing, Henan, Shanxi, Gansu and Sichuan), detailed morphological observations, and available morphological evidence — re-examined some of her taxonomic articles, corrected several erroneous conclusions therein, and consequently describes four new genera, three new combinations, and fifteen new species of Camaenidae from China.

Material and methods

All specimens were collected from Henan, Shanxi, Gansu and Sichuan provinces, China, between 2025 and 2026. Living specimens were immersed in boiling water (100 °C) for 10–20 s and subsequently transferred to water at approximately 25 °C to facilitate cooling and the extraction of soft parts. The soft bodies were then fixed in either 70% ethanol or absolute ethanol. Empty shells were cleaned, air-dried, and stored at room temperature. All specimens are deposited in the mollusc collection of the Museum of Nanchang University, as well as in the private collections of Zhi-Yao Wang (WZY), Quan-Yu Zhang (ZQY), and Yu-Xuan Huan (HYX).

Photographs of the specimens were taken using a camera (EOS 6D, Canon) equipped with a macro lens (EF 100 mm f/2.8L IS USM, Canon). All images were processed using Adobe Photoshop CC 2020 (Adobe, San Jose, USA).

Taxonomy

Superfamily Helicoidea Rafinesque, 1815

Family Camaenidae Pilsbry, 1895

Subfamily Bradybaeninae Pilsbry, 1898

Genus *Cathaica* Möllendorff, 1884

Type species. *Helix pyrrhozona* Philippi, 1845, by original designation.

***Cathaica danqin* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan, sp. nov.**
丹沁华蜗牛

https://zoobank.org/B2A20929-1B25-47E7-9616-76333D604A54

Fig. 1A–C

Type materials. Holotype. NCUZZ260101 (Fig. 1A), Boai County [博爱县], Jiaozuo City [焦作市], Henan Province [河南省], China, 35°13'N, 113°04'E, 150 m above sea level, leg. Zhi-Yao Wang & Quan-Yu Zhang, 11 July 2025. Paratypes. NCUZZ260102–09 (8 specimens) (Fig. 1B, C), same data as holotype; WZY20250711Da (50 specimens), same data as holotype.

FIGURE 1. *Cathaica danqin* **sp. nov.**: **A** holotype: NCUZZ260101 **B, C** paratypes: NCUZZ260102-03.

Etymology. This new species is mainly distributed in the Dan River [丹河] and Qin River [沁河] basins; therefore, it is named after these two rivers.

Description. *Shell* (Fig. 1) depressed, thin, solid, dextral. Spire very low. Whorls scarcely convex. Suture superficial. Umbilicus broad, approximately 1/6 of diameter. Shell gently transitioning into umbilicus. Columella oblique. Columellar lip slightly dilated, scarcely overhanging umbilicus. Spiral furrows absent. Growth lines indistinct. Both young and adult shells smooth and keeled; keel blunt, not sharply projecting. Body whorl basally convex, final part scarcely ascending or descending. Aperture roundedly quadrate, internally with ring-like thickening; without basal tooth. Peristome straight, slightly expanded below, oblique, somewhat sinuate, not continuous. Parietal callus indistinct. Shell glossy, white, with two reddish-brown bands: one below suture and rather indistinct, other one below keel, lower margin diffuse, variable width, extending in some individuals to near the umbilicus. Peristome white.

Measurements (n = 5): Shell width: 18.3–19.7 mm; shell height: 8.8–9.6 mm.

Distribution. China: Henan. This new species is known only from the type locality.

Ecology. *Cathaica danqin* **sp. nov.** inhabits limestone cliffs in low-altitude river valleys.

Remarks. *Cathaica danqin* **sp. nov.** can be distinguished from congeners by its nearly flattish whorls, blunt keel, and relatively straight peristome.

Cathaica luli Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan, sp. nov.
陆离华蜗牛

https://zoobank.org/32223460-F020-43F3-A152-C8AA680C08FC

Fig. 2A–C

Type materials. Holotype. NCUZZ260201 (Fig. 2A), Shangbali Town [上八里镇], Huixian Shi [辉县市], Xinxiang City [新乡市], Henan Province [河南省], China, 35°33'N, 113°34'E, 1000 m above sea level, leg. Zhi-Yao Wang & Quan-Yu Zhang, 7 April 2026. Paratypes. NCUZZ260202–10 (9 specimens) (Fig. 2B, C), same data as holotype; WZT20260407Aa (30 specimens), same data as holotype.

FIGURE 2. *Cathaica luli* **sp. nov.**: **A** holotype: NCUZZ260201 **B, C** paratypes: NCUZZ260202-03.

Etymology. This new species is named after 'Luli', the ancient Chinese name for glazed glass. This is because the shell is glossy and bears broad, vivid color bands.

Description. *Shell* (Fig. 2) discoid, thin, solid, dextral. Spire very low, even flatted. Whorls convex. Suture distinct, superficial. Umbilicus broad, approximately 1/8 of diameter. Shell gently transitioning into umbilicus. Columella oblique. Columellar lip dilated, partially covering umbilicus. Spiral furrows absent. Growth lines indistinct. Both young and adult shells smooth and rounded. Body whorl basally convex, final part descending. Aperture roundedly quadrate, internally with ring-like thickening; without basal tooth. Peristome expanded, slightly

reflected, oblique, somewhat sinuate, not continuous. Parietal callus indistinct. Shell glossy, white, with two reddish-brown bands: one below suture, pale brown and very indistinct, other one slightly above periphery, deep reddish and clearly defined. Peristome white.

Measurements (n = 5): Shell width: 21.6–22.8 mm; shell height: 11.1–12.5 mm.

Distribution. China: Henan. This new species is known only from the type locality.

Ecology. *Cathaica luli* **sp. nov.** inhabits limestone or sandstone cliffs and rock piles.

Remarks. *Cathaica luli* **sp. nov.** can be distinguished from its congeners by its smooth shell, slightly reflected peristome, and broad color band.

Cathaica fengquanensis Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan, sp. nov.
凤泉华蜗牛

https://zoobank.org/15122A97-F96F-4FD8-AD1C-D2287B209547

Fig. 3A–C

Type materials. Holotype. NCUZZ260301 (Fig. 3A), North of Fengquan District [凤泉区北侧], Xinxiang City [新乡市], Henan Province [河南省], China, 35°25'N, 113°56'E, 200 m above sea level, leg. Zhi-Yao Wang & Quan-Yu Zhang, 15 March 2026. Paratypes. NCUZZ260302–11 (10 specimens) (Fig. 3B, C), same data as holotype; WZY20260315Aa (50 specimens), same data as holotype.

FIGURE 3. *Cathaica fengquanensis* **sp. nov.**: **A** holotype: NCUZZ260301. **B, C** paratypes: NCUZZ260302-03.

Etymology. This new species is named after the type locality: Fengquan District [凤泉区].

Description. *Shell* (Fig. 3) discoid, thin, solid, dextral. Spire low. Whorls convex. Suture impressed. Umbilicus narrow. Shell gently transitioning into umbilicus. Columella oblique. Columellar lip dilated, slightly covering

umbilicus. Spiral furrows absent. Shell surface with densely weak rib. Growth lines indistinct. Both young and adult shells smooth and rounded. Body whorl basally convex, final part scarcely ascending or descending. Aperture roundedly quadrate, internally with ring-like thickening; without basal tooth. Peristome expanded, oblique, slightly sinuate, not continuous. Parietal callus indistinct. Shell dull, milky white, slightly yellowish, with one narrow reddish-brown bands along periphery. Peristome white.

Measurements (n = 5): Shell width: 17.5–20.2 mm; shell height: 10.1–10.9 mm.

Distribution. China: Henan. This new species is known only from the type locality.

Ecology. *Cathaica fengquanensis* **sp. nov.** inhabits sandstone rock piles, occurring from mountaintops to adjacent foothill areas.

Remarks. *Cathaica fengquanensis* **sp. nov.** can be distinguished from other congeners by its densely weak ribs, markedly expanded peristome, and milky white shell color.

Cathaica fenglingae Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan, sp. nov.
冯氏华蜗牛

https://zoobank.org/252E79B1-0F42-4505-93A3-E665B9FE438A

Fig. 4A–C

Type materials. Holotype. NCUZZ260401 (Fig. 4A), Magedang Township [马圪当乡], Lingchuan County [陵川县], Jincheng City [晋城市], Shanxi Province [山西省], China, 35°37’N, 113°26’E, 900 m above sea level, leg. Zhi-Yao Wang & Quan-Yu Zhang, 17 June 2025. Paratypes. NCUZZ260402-05 (4 specimens) (Fig. 4B, C), WZY20250617Aa (30 specimens).

FIGURE 4. *Cathaica fenglingae* **sp. nov.**: **A** holotype: NCUZZ260401. **B, C** paratypes: NCUZZ260402-03.

Etymology. This new species is dedicated to Ms. Feng Ling [冯玲], the mother of one of the authors, Xuan-Yu Huan.

Description. *Shell* (Fig. 4) ovate-conic, thin, solid, dextral. Spire conid, high. Whorls convex. Suture deep. Umbilicus vaery narrow, with a gradual transition from shell base. Spiral furrows absent. Shell surface with shallow ribs. Shell surface with ribs that do not form clear crenulations at periphery. Growth line between ribs indistinct. Both young and adult shells smooth and rounded. Body whorl slightly shouldered, beneath convex. Columellar lip dilated. Aperture peach-shaped, slightly expend, internally with ring-like thickening; with a very low basal tooth, near columellar. Peristome expanded, oblique, slightly sinuate, not continuous. Parietal callus indistinct. Shell dull, light brown, with a broad reddish brown peripheral band at periphery. Peristome white.

Measurements (n = 5): Shell width: 13.6–14.6 mm; shell height: 9.1–9.9 mm.

Distribution. China: Shanxi. This new species is known only from the type locality.

Ecology. *Cathaica fenglingae* **sp. nov.** inhabits shrubs at the base of limestone cliffs in valleys and moves on shaded rock surfaces or tree branches.

Remarks. *Cathaica fenglingae* **sp. nov.** resembles *C. pyrrhozona montana* in shell morphology but can be distinguished by its slightly shouldered body whorl and a broad color band aligned with the periphery.

Zhang & Wu (2026) did not provide a phylogenetic tree based on COI data, nor sufficient anatomical evidence to demonstrate that the differences in genital characters among these three taxa fall within the normal range of intraspecific variation. Therefore, we herein restore their validity: *C. mengi* Yen, 1935, **sp. restit.**, *C. sculptilis* Z.-Y. Wang, Y.-M. He, H. Chen & Q.-Y. Zhang, 2025, **sp. restit.**, and *C. wangjiaxunae* Z.-Y. Wang, Y.-M. He, H. Chen & Q.-Y. Zhang, 2025, **sp. restit.**

The use of the presence of double proximal accessory sacs as a diagnostic character for delimiting *C. fasciola*, as proposed by Zhang & Wu (2026), is inconsistent with the available anatomical and phylogenetic evidence for *C. qiguo*. We therefore restore the validity of *C. zhangcunxiangi* Z.-Y. Wang, Y.-M. He, H. Chen & Q.-Y. Zhang, 2025, **sp. restit.**

Genus *Pseudiberus* Ancey, 1887

Type species. *Helix tectumsinense* E. von Martens, 1874, by subsequent designation (Pilsbry 1895).

Pseudiberus rupiconditus Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan, sp. nov.
崖隐拟蛇蜗牛

https://zoobank.org/D613F1C2-726D-4C1F-A1BF-3A95B2DF41CB

Fig. 5A–C

Type materials. Holotype. NCUZZ260501 (Fig. 1A), Magedang Township [马圪当乡], Lingchuan County [陵川县], Jincheng City [晋城市], Shanxi Province [山西省], China, 35°37’N, 113°26’E, 900 m above sea level, leg. Zhi-Yao Wang & Quan-Yu Zhang, 17 June 2025. Paratypes. NCUZZ260502-03 (2 specimens) (Fig. 5B, C), WZY20250617Ab (6 specimens).

Etymology. This new species is named in reference to its habit of inhabiting limestone cliffs and being difficult to detect.

Description. *Shell* (Fig. 5) discoid, thin, fragile, dextral. Spire flatted, even slightly concave. Whorls flattish. Suture distinct, superficial. Umbilicus broad, approximately 1/8 of diameter. Shell gently transitioning into umbilicus. Columella oblique. Columellar lip dilated, partially covering umbilicus. Spiral furrows absent. Growth lines distinct. Both young and adult shells rough with densely scaly periostracum derivatives and keeled; keel projecting but not sharp. Body whorl basally convex, final part descending. Aperture roundedly quadrate, internally with ring-like thickening; without basal tooth. Peristome expanded, oblique, upper margin sinuate, lower margin reflected, not continuous. Parietal callus indistinct. Shell dull, light brown, slightly translucent, umbilical region

pale yellow, peristome white.

Measurements (n = 5): Shell width: 33.8–34.5 mm; shell height: 13.2–15.5 mm.

Distribution. China: Shanxi. This new species is known only from the type locality.

Ecology. *Pseudiberus rupiconditus* **sp. nov.** inhabits relatively intact limestone rock cliff.

Remarks. *Pseudiberus rupiconditus* **sp. nov.** can be distinguished from other congeners by its discoidal, fragile shell, densely scaly periostracum derivatives, and blunt keel.

FIGURE 5. *Pseudiberus rupiconditus* **sp. nov.**: **A** holotype: NCUZZ260501. **B, C** paratypes: NCUZZ260502-03.

Pseudiberus cangwei Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan, sp. nov.
沧卫拟蛇蜗牛

https://zoobank.org/88C7B9C7-A191-437E-B8A6-BBBBF0E41B72

Fig. 6A–C

Type materials. Holotype. NCUZZ260601 (Fig. 6A), Weihui City [卫辉市], Xinxiang City [新乡市], Henan Province [河南省], China, 35°38'N, 113°58'E, 250 m above sea level, leg. Zhi-Yao Wang & Quan-Yu Zhang, 18 June 2025. Paratypes. NCUZZ260602-21 (20 specimens) (Fig. 6B, C), WZY20250618Ba (50 specimens).

Etymology. The specific epithet of this new species is derived from a combination of the name of its distributional river, the Cang River, and the locality name, Weihui City.

Description. *Shell* (Fig. 6) depressed, thin, solid, dextral. Spire low, sometimes slightly flattened. Whorls flattish. Suture distinct, superficial. Umbilicus broad, approximately 1/9 of diameter. Shell gently transitioning into umbilicus. Columella oblique. Columellar lip dilated, partially covering umbilicus. Spiral furrows absent. Growth lines distinct. Both young and adult shells rough with indistinct periostracum derivatives and keeled; keel projecting

and forming a narrow and hollow peripheral carina. Body whorl basally convex, final part scarcely ascending or descending. Aperture peach-shaped, internally with ring-like thickening; without basal tooth. Peristome expanded, oblique, upper margin sinuate, lower margin reflected, not continuous. Parietal callus indistinct. Shell dull, brown or reddish brown, umbilical region lighter, carinate and peristome white.

Measurements (n = 5): Shell width: 19.3–20.9 mm; shell height: 7.2–9.2 mm.

Distribution. China: Henan. This new species is known only from the type locality.

Ecology. *Pseudiberus cangwei* **sp. nov.** inhabits low-altitude limestone hills or valleys.

Remarks. *Pseudiberus cangwei* **sp. nov.** can be distinguished from other congeners by its narrow, hollow peripheral carina.

FIGURE 6. *Pseudiberus cangwei* **sp. nov.**: **A** holotype: NCUZZ260601. **B, C** paratypes: NCUZZ260602-03.

Pseudiberus zhongtiaoensis Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan, sp. nov.
中条拟蛇蜗牛

https://zoobank.org/EE257C63-F0AD-419B-B3DB-6AFBB6C567DE

Fig. 7A–C

Type materials. Holotype. NCUZZ260701 (Fig. 7A), Yuxiang Town [虞乡镇], Yongji City [永济市], Yuncheng City [运城市], Shanxi Province [山西省], China, 34°47'N, 110°37'E, 1700 m above sea level, leg. Zhi-Yao Wang & Quan-Yu Zhang, 21 June 2025. Paratypes. NCUZZ260702-11 (10 specimens) (Fig. 7B, C), WZY20250621Ba (30 specimens).

Etymology. This new species is named after the type locality: Zhongtiao Mountains [中条山].

Description. *Shell* (Fig. 7) depressed, thin, solid, dextral. Spire low. Whorls flattish. Suture distinct, superficial. Umbilicus broad, approximately 1/9 of diameter. Shell gently transitioning into umbilicus. Columella oblique.

Columellar lip dilated, partially covering umbilicus. Spiral furrows absent. Growth lines distinct, forming irregular white streaks. Both young and adult shells rough with indistinct periostracum derivatives and keeled; keel projecting and forming sharply carinate. Body whorl basally convex, final part scarcely ascending or descending. Aperture peach-shaped, internally with ring-like thickening; without basal tooth. Peristome strongly expanded, oblique, upper margin sinuate, lower margin reflected, not continuous. Parietal callus indistinct. Shell dull, light brown, umbilical region lighter, peristome white.

Measurements (n = 5): Shell width: 18.8–20.8 mm; shell height: 6.9–9.6 mm.

Distribution. China: Shanxi. This new species is known only from the type locality.

Ecology. *Pseudiberus zhongtiaoensis* **sp. nov.** inhabits high-altitude sandstone and limestone rock cliff.

Remarks. *Pseudiberus zhongtiaoensis* **sp. nov.** can be distinguished from other congeners by its markedly expanded peristome and irregular white streaks.

FIGURE 7. *Pseudiberus zhongtiaoensis* **sp. nov.**: **A** holotype: NCUZZ260701. **B, C** paratypes: NCUZZ260702-03.

Pseudiberus weijieae Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan, sp. nov.
魏氏拟蛇蜗牛

https://zoobank.org/D9ED4146-8BDC-4FA7-92AB-0890912CA618

Fig. 8A–C

Type materials. Holotype. NCUZZ260801 (Fig. 8A), Boai County [博爱县], Jiaozuo City [焦作市], Henan Province [河南省], China, 35°13’N, 113°04’E, 150 m above sea level, leg. Zhi-Yao Wang & Quan-Yu Zhang, 11 July 2025. Paratypes. NCUZZ260802-09 (8 specimens) (Fig. 8B, C), same data as holotype; WZY20250711Da (20 specimens), same data as holotype.

FIGURE 8. *Pseudiberus weijieae* **sp. nov.**: **A** holotype: NCUZZ260801. **B, C** paratypes: NCUZZ260802-03.

Etymology. This new species is named in honor of Ms. Wei Jie [魏杰], the mother of the author Mr. He Yueming.

Description. *Shell* (Fig. 8) depressed, thin, solid, dextral. Spire low. Whorls flattish. Suture distinct, superficial. Umbilicus broad, approximately 1/9 of diameter. Shell gently transitioning into umbilicus. Columella oblique. Columellar lip dilated, partially covering umbilicus. Spiral furrows absent. Growth lines distinct, forming irregular white streaks. Both young and adult shells rough with indistinct periostracum derivatives and keeled; keel projecting and forming sharply carinate. Body whorl basally markedly convex, final part scarcely ascending or descending. Aperture peach-shaped, internally with ring-like thickening; without basal tooth. Peristome expanded, oblique, upper margin sinuate and slightly reflected externally, lower margin reflexed, not continuous. Parietal callus indistinct. Shell dull, reddish brown, with two white bands: one below suture, other one periphery. Umbilical area and adjacent region white, peristome white.

Measurements (n = 5): Shell width: 18.2–19.6 mm; shell height: 8.2–9.6 mm.

Distribution. China: Henan. This new species is known only from the type locality.

Ecology. *Pseudiberus weijieae* **sp. nov.** inhabits limestone cliffs in low-altitude river valleys.

Remarks. *Pseudiberus weijieae* **sp. nov.** can be distinguished from other congeners by its slightly externally reflected upper lip and distinct bicolored band.

***Pseudiberus daiwenhaoi* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan, sp. nov.**
戴氏拟蛇蜗牛

https://zoobank.org/D266B1FD-A1F8-4FC7-8460-423403A8FF8C

Fig. 9A–C

Type materials. Holotype. NCUZZ260901 (Fig. 9A), Jishan County [稷山县], Yuncheng City [运城市], Shanxi Province [山西省], China, 35°42'N, 110°51'E, 700 m above sea level, leg. Zhi-Yao Wang & Quan-Yu Zhang, 23 June 2025. Paratypes. NCUZZ260902-09 (8 specimens) (Fig. 9B, C), same data as holotype; WZY20250623Ba (20 specimens), same data as holotype.

FIGURE 9. *Pseudiberus daiwenhaoi* **sp. nov.**: **A** holotype: NCUZZ260901. **B, C** paratypes: NCUZZ260902-03.

Etymology. The new species is named after Mr. Wen-Hao Dai [戴文皓], in recognition of his assistance to the authors.

Description. *Shell* (Fig. 9) ovate-conic, thin, solid, dextral. Whorls flattish. Suture distinct, superficial. Umbilicus narrow. Shell gently transitioning into umbilicus. Columella oblique. Columellar lip dilated, almost completely covering umbilicus. Spiral furrows absent. Growth lines distinct. Both young and adult shells rough with periostracum derivatives and granular projections; keel projecting and forming blunt carinate. Body whorl basally convex, final part scarcely ascending or descending. Aperture peach-shaped, internally with ring-like thickening; without basal tooth. Peristome strongly expanded, oblique, sinuate, lower margin reflected, not continuous. Parietal callus indistinct. Shell dull, brown. Some individuals with two white bands: one below suture and very narrow, other one above periphery. Umbilical and adjacent region white, peristome white.

Measurements (n = 5): Shell width: 20.4–22.4 mm; shell height: 11.1–13 mm.

Distribution. China: Shanxi. This new species is known only from the type locality.

Ecology. *Pseudiberus daiwenhaoi* **sp. nov.** inhabits limestone cliffs in low-altitude river valleys.

Remarks. *Pseudiberus daiwenhaoi* **sp. nov.** can be distinguished from other congeners by its rough shell with granular projections, body whorl markedly convex basally, and strongly expanded peristome.

Genus *Metodontia* Möllendorff, 1886

Type species. *Helix hemipleuris* Möllendorff, 1885, by original designation.

Metodontia carinata Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan, sp. nov.
龙骨间齿螺

https://zoobank.org/95C6B4B9-3FD8-46B0-8937-FCE9A8B62DDF

Fig. 10A–C

Type materials. Holotype. NCUZZ261001 (Fig. 10A), Paishitou Township [拍石头乡], Huixian City [辉县市], Xinxiang City [新乡市], Henan Province [河南省], China, 113°48'E, 35°35'N, leg. Quan-Yu Zhang, 2 July 2025. Paratypes. NCUZZ261002-09 (8 specimens) (Fig. 10B, C), same data as holotype; ZQY20250702Aa (50 specimens), same data as holotype.

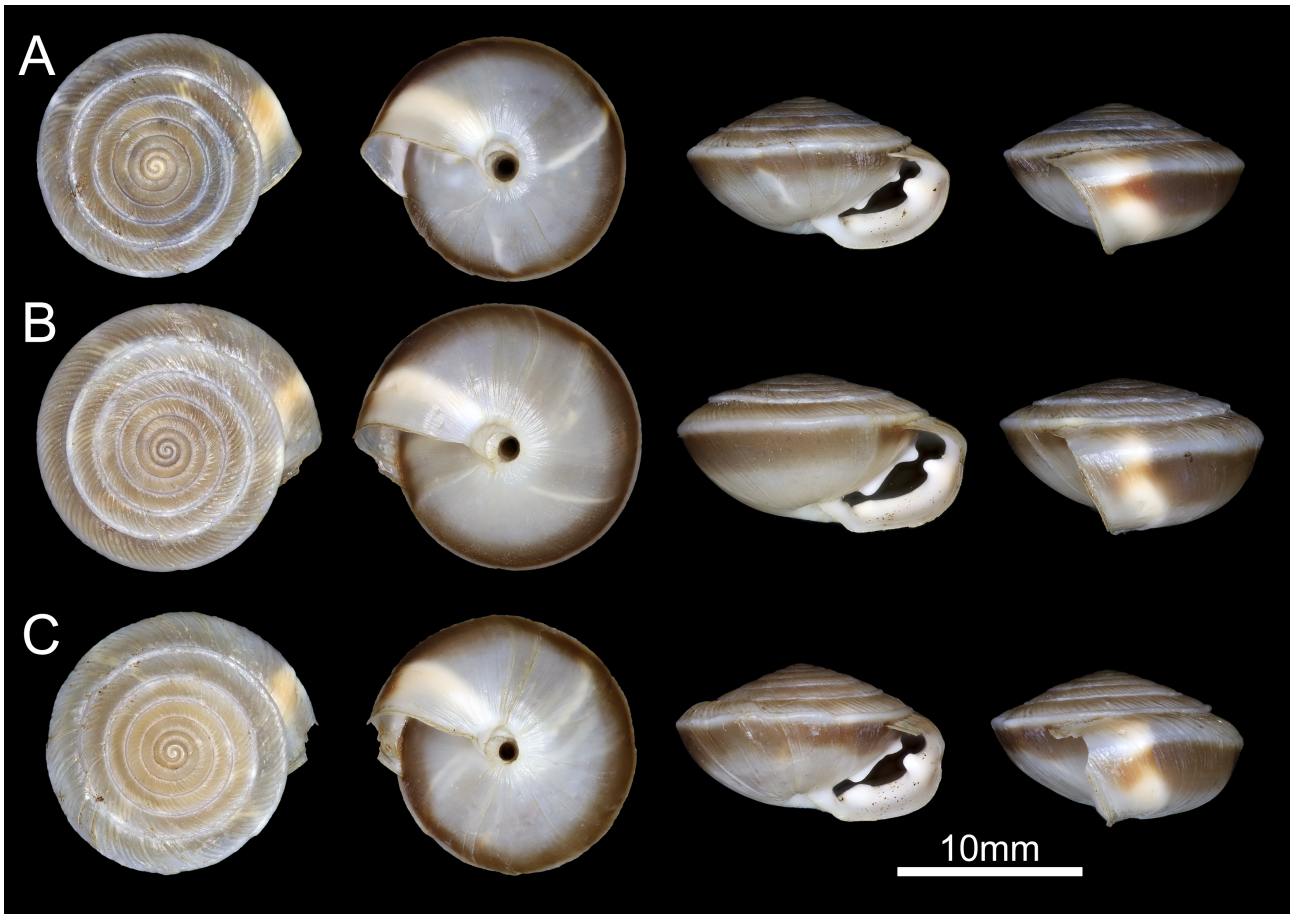

FIGURE 10. *Metodontia carinata* **sp. nov.**: **A** holotype: NCUZZ261001. **B, C** paratypes: NCUZZ261002-03.

Etymology. The species name is derived from its unique shell keel and five teeth.

Description. *Shell* (Fig. 10) depressed, conoidal, thin, dextral; apex distinct and blunt. Whorls convex. Suture superficial. Umbilicus narrow, with an abrupt junction to shell base. Columella oblique; columellar lip dilated, slightly curved medially, not covering umbilicus; columella of body whorl slightly recurved near aperture. Protoconch finely granulose. Teleoconch smooth; dorsal surface with dense, shallow ribs; growth lines between ribs indistinct; without scales or spiral furrows. Young and adult shells sharply carinate at periphery. Body whorl gradually descending toward aperture. Aperture rounded-quadrate, oblique, thickened internally forming a ring-like thickening. Aperture complex, bearing five teeth: one small columellar tooth; one low, broad basal tooth; one palatal teeth; two wall teeth, lower directed towards basal tooth, upper directed towards palatal tooth. Peristome slightly expanded, thickened, discontinuous, somewhat sinuate. Parietal callus thin and indistinct. Shell dirty white, with

two broad light brown bands on dorsal and ventral sides of keel; upper band nearly occupying entire dorsal surface.

Measurements (n = 5): Shell width: 14.3–15.2 mm; shell height: 8.2–8.7 mm.

Distribution. China: Henan. This new species is known only from the type locality.

Ecology. *Metodontia carinata* **sp. nov.** inhabits rocky debris on low hills, active on the ground like other *Metodontia* species. Its distribution overlaps with *M. huaiensis* but they are not sympatric.

Remarks. This species can be readily distinguished from other congeners by its prominent shell keel, two color bands, and five teeth on the aperture.

Genus *Laeocathaica* Möllendorff, 1899

Type species. *Helix* (*Plectotropis*) *christinae* H. Adams, 1870, by original designation.

Laeocathaica jiyin Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan, sp. nov.
极阴射带蜗牛

https://zoobank.org/64934FBB-12C9-44DA-B5C4-13865DAA9E38

Fig. 11A–B

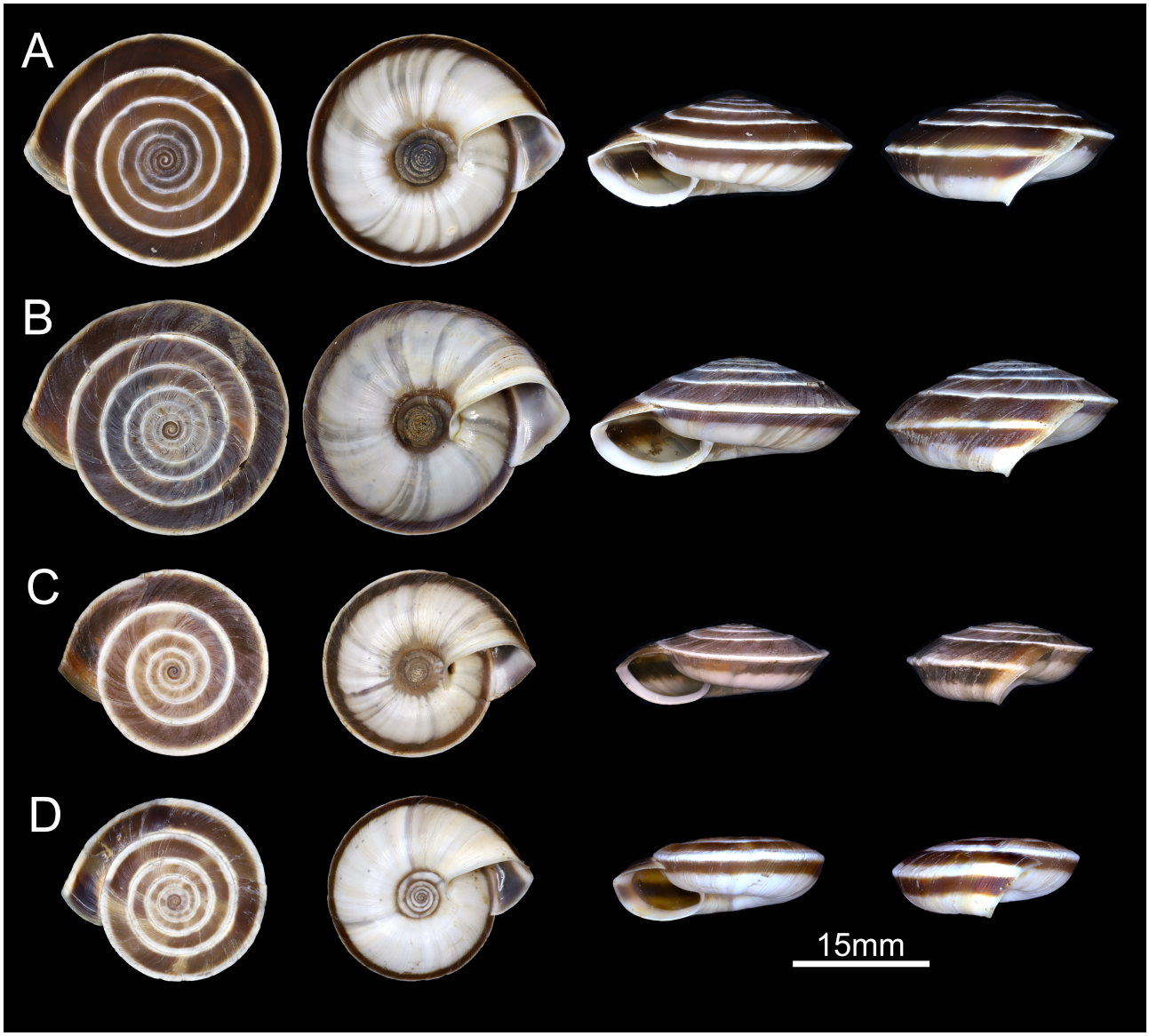

FIGURE 11. *Laeocathaica jiyin* **sp. nov.** and its most similar congeners: **A** holotype: NCUZZ261101. **B** paratype: NCUZZ261102. **C** *L. prionotropis* Möllendorff, 1899. **D** *L. amdoana* Möllendorff, 1899.

Type materials. Holotype. NCUZZ261101 (Fig. 11A), Hekou Village [河口村], Jianshan Township [尖山乡], Wenxian County [文县], Longnan City [陇南市], Gansu Province [甘肃省], China, 33°02'N, 104°52'E, 850 m above sea level, leg. Zhi-Yao Wang & Quan-Yu Zhang, 3 July 2025. Paratypes. NCUZZ261102-06 (5 specimens) (Fig. 11B), same data as holotype; WZY20250703Eb (20 specimens), same data as holotype.

Etymology. This species is named after the sect "Jiyin Island" from the Chinese fantasy novel *A Mortal's Journey to Immortality*.

Description. *Shell* (Fig. 11 A–B) depressed, slightly thick, solid, sinistral. Spire low. Whorls flattish. Suture superficial. Umbilicus broad, approximately 1/4 of diameter, protoconch visible through umbilicus. Shell gently transitioning into umbilicus. Columella oblique. Columellar lip slightly dilated, umbilicus unobscured. Spiral furrows absent. Growth lines indistinct. Both young and adult shells smooth and with sharply carinate. Body whorl basally convex, final part scarcely ascending or descending. Aperture roundedly quadrate, slightly expanded below, internally with ring-like thickening; without basal tooth. Peristome expanded, somewhat reflected below, oblique, sinuate, not continuous. Parietal callus indistinct. Shell dull, ground color dark reddish, with two white bands: one narrow along periphery, other broad between umbilicus and keel. Peristome white.

Measurements (n = 5): Shell width: 27.1–30 mm; shell height: 12.1–12.6 mm.

Distribution. China: Gansu. This new species is known only from the type locality.

Ecology. *Laeocathaica jiyin* **sp. nov.** occurs on limestone scree slopes along both sides of river valleys.

Remarks. *Laeocathaica jiyin* **sp. nov.** is morphologically and conchologically similar to *L. prionotropis* Möllendorff, 1899 (Fig. 11C)and *L. amdoana* Möllendorff, 1899 (Fig. 11D), but differs from both in having a significantly greater number of whorls.

Laeocathaica chensha Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan, sp. nov.
辰砂射带蜗牛

https://zoobank.org/440DABEE-5AF0-448F-A054-DAB071F70651

Fig. 12A–C

Type materials. Holotype. NCUZZ261201 (Fig. 12A), Shijiba Town [石鸡坝镇], Wenxian County [文县], Longnan City [陇南市], Gansu Province [甘肃省], China, 33°04'N, 104°27'E, 1200 m above sea level, leg. Zhi-Yao Wang & Quan-Yu Zhang, 4 July 2025. Paratypes. NCUZZ261202–11 (10 specimens) (Fig. 12B, C), same data as holotype; WZY20250704Ha (50 specimens), same data as holotype.

Etymology. The specific name 'chensha' is derived from the traditional Chinese term for cinnabar, referring to the dark reddish shell coloration of this species.

Description. *Shell* (Fig. 12 A–C) depressed, thin, solid, sinistral. Spire very low. Whorls flattish. Suture distinct, superficial. Umbilicus very broad, approximately 1/3 of diameter, protoconch visible through umbilicus. Shell gently transitioning into umbilicus. Columella oblique. Columellar lip slightly dilated, umbilicus unobscured. Spiral furrows above keel, near periphery, indistinct. Shell surface with densely weak rib, occasionally interrupted or fused. Growth lines indistinct. Both young and adult shells smooth and keeled; keel projecting and forming sharply carinate. Body whorl basally slightly convex, final part scarcely somewhat descending. Aperture subrhomboidal, internally with weak ring-like thickening; with basal tooth, near columella. Peristome slightly expanded, somewhat reflected below, oblique, sinuate, not continuous. Parietal callus indistinct. Shell dull, ground color deep red; a white band around umbilicus. Peristome and carinate white.

Measurements (n = 5): Shell width: 18.5–19.1 mm; shell height: 5.3–5.9 mm.

Distribution. China: Gansu. This new species is known only from the type locality.

Ecology. *Laeocathaica chensha* **sp. nov.** occurs on limestone scree slopes along both sides of river valleys.

Remarks. *Laeocathaica chensha* **sp. nov.** is similar to *L. carinalis* Chen & Zhang, 2004 (Fig. 12D) and *L. potanini* Möllendorff, 1899 (Fig. 12E), but can be distinguished by its body whorl being slightly convex basally, a weak ring-like thickening, a slightly downward-curved aperture, a very narrowly expanded peristome, and a narrow white band surrounding the umbilical region.

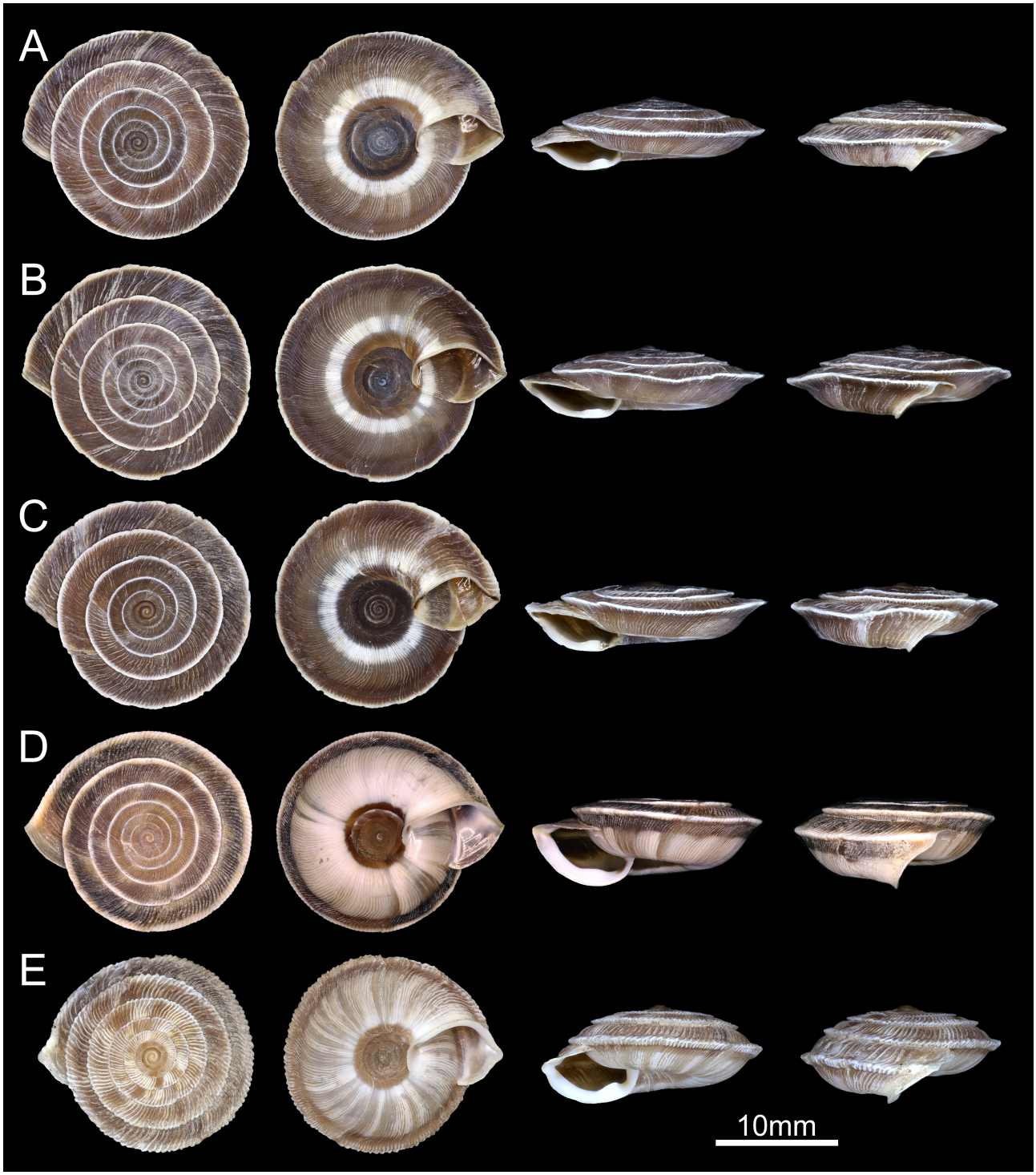

FIGURE 12. *Laeocathaica chensha* **sp. nov.** and its most similar congeners: **A** holotype: NCUZZ261201. **B, C** paratypes: NCUZZ261202-03. **D** *L. carinalis* Chen & Zhang, 2004. **E** *L. potanini* Möllendorff, 1899.

***Laeocathaica yuhuan* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan, sp. nov.**
玉环射带蜗牛
https://zoobank.org/1CC079BC-383E-47A4-AA89-03198CF7C33C
Fig. 13A–C

Type materials. Holotype. NCUZZ261301 (Fig. 13A), Jiuzhaigou County [九寨沟县], Aba Tibetan and Qiang Autonomous Prefecture [阿坝藏族羌族自治州], Sichuan Province [四川省], China, 33°19'N, 104°18'E, 850 m above sea level, leg. Zhi-Yao Wang & Quan-Yu Zhang, 3 July 2025. Paratypes. NCUZZ261302-06 (5 specimens) (Fig. 13B, C), same data as holotype. WZY20250703Eb (30 specimens), same data as holotype.

FIGURE 13. *Laeocathaica yuhuan* **sp. nov.** and its most similar congeners: **A** holotype: NCUZZ261301. **B, C** paratypes: NCUZZ261302-03. **D** *L. nordsiecki* Wu, 2023.

Etymology. The specific epithet refers to the conspicuous white band along the shell periphery, resembling a jade ring.

Description. *Shell* (Fig. 13 A–C) depressed, slightly thick, very solid, sinistral. Spire low. Whorls flattish. Suture superficial. Umbilicus very broad, approximately 1/3 of diameter, protoconch visible through umbilicus. Shell gently transitioning into umbilicus. Columella oblique. Columellar lip slightly dilated, umbilicus unobscured. Spiral furrows absent. Growth lines indistinct. Both young and adult shells smooth and with blunt keel, shell slightly constricted above keel. Body whorl basally convex, abruptly descending in front. Aperture roundedly quadrate, internally with ring-like thickening; with a indistinct tooth near columella. Peristome expanded, slightly reflected, oblique, sinuate, thickened callus distinct and forming a continuous peristome. Shell strongly glossy, almost

transparent, with one broad white color band above keel. Peristome white.

Measurements (n = 5): Shell width: 14.4–16.5 mm; shell height: 6–7 mm.

Distribution. China: Sichuan. This new species is known only from the type locality.

Ecology. *Laeocathaica yuhuan* **sp. nov.** occurs on limestone scree slopes along both sides of river valleys.

Remarks. *Laeocathaica yuhuan* **sp. nov.** is most similar to *L. nordsiecki* Wu, 2023 (Fig. 13D), but can be distinguished by its larger shell size, a carinate body whorl, an inconspicuous basal tooth, and a relatively more narrow umbilicus.

Genus *Lanyue* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan gen. nov.
揽月蜗牛属

https://zoobank.org/AC25AE23-6EB9-4793-A277-23409CE94A97

Type species. *Lanyue pekinensis* (Deshayes, 1874), **comb. nov.**

Etymology. The generic name "Lanyue" is derived from a classical Chinese poem, meaning 'to seize the moon from the sky', alluding to the habits of species in this genus.

Diagnosis. Shell ovate-conic, very thin, fragile, dextral. Spire low to conoid. Whorls convex. Suture impressed. Umbilicus broad. Shell gently transitioning into umbilicus. Columella oblique. Columellar lip dilated. Spiral furrows present. Both young and adult shells smooth and rounded. Body whorl not distinctly swollen, basally convex. Aperture roundedly quadrate, internally with ring-like thickening. Peristome slightly expanded, oblique, not continuous. Parietal callus very indistinct. Shell glossy, with one narrow color bands above periphery and usually with irregular white thickened textures. Peristome white.

Differential diagnosis. *Lanyue* **gen. nov.** is similar to *Cathaica* and *Pseudiberus* in both distribution and shell morphology, but can be distinguished by its extremely thin and fragile shell, the body whorl not strongly inflated, the protoconch visible through the umbilicus, and ring-like thickening present only at aperture; no intermittent ring-like thickenings on remaining shell.

The genitalia of *Lanyue* **gen. nov.** resemble those of *Pseudiberus*, possessing a swollen penis and regularly interlaced pilasters; the penial retractor muscle is short and stout. These characters suggest that *Lanyue* **gen. nov.** may be more closely related to *Pseudiberus*, and can be clearly distinguished from other genera within the same subfamily.

Although habits are generally not emphasized in land snail taxonomy, extensive field collections by the authors indicate that different genera, species, and even populations show distinct ecological preferences. *Lanyue* is restricted to high-altitude, cool habitats, requiring relatively high humidity and limestone scree slopes. It is rarely observed during the daytime in the absence of rain and is active mainly at night. These ecological traits further distinguish it from *Cathaica* and *Pseudiberus*.

Distribution and ecology. This genus is known to occur sporadically on some high mountains of the Taihang and Yanshan mountain ranges.

Lanyue pekinensis (Deshayes, 1874), comb. nov.
北京揽月蜗牛

Fig. 14A

Material. NCUZZ261401 (Fig. 14A), Baihua Mountain [百花山], Qingshui Town [清水镇], Mentougou District [门头沟区], Beijing City [北京市], China, 39°51'N, 115°36'E, 1900 m above sea level, leg. Xiang-Wei Cheng & Xiao-Peng Xu, June 2025.

Redescription. *Shell* (Fig. 14A) ovate-conic, very thin, fragile. Spire very low. Whorls convex. Suture

impressed. Umbilicus broad, approximately 1/4 of diameter, protoconch visible through umbilicus. Shell gently transitioning into umbilicus. Columella oblique. Columellar lip slightly dilated, umbilicus unobscured. Spiral furrows present, indistinct. Shell surface with dense, low ribs, about 70 in number (Type specimen). Growth lines indistinct. Both young and adult shells smooth and rounded. Body whorl basally convex, not strongly inflated, final part slightly descending. Aperture semilunar, internally with ring-like thickening; with low basal tooth near columella. Peristome narrowly expanded, oblique, slightly sinuate, not continuous. Parietal callus indistinct. Shell glossy, pale yellow, somewhat transparent; surface with few, irregular white transverse streaks on ribs. One reddish-brown bands above periphery. Peristome white.

Measurements: Shell width: 13.7 mm; shell height: 6.8 mm.

Distribution. China: Beijing. This new combination is known only from the type locality.

Ecology. *Lanyue pekinensis* **comb. nov.** inhabits high-altitude limestone scree.

Remarks. Although no specimens from the type locality, Xishan, Beijing, were available for examination, specimens from Baihua Mountain, Beijing, were obtained. Despite a certain degree of geographic isolation between Baihua Mountain and Xishan, Yen (1939) referred specimens from Baihua Mountain to this species. In addition, specimen NCUZZ261401 closely resembles the original illustration of the type specimen provided by Deshayes (1874). Therefore, based on the available evidence, specimen NCUZZ261401 is herein referred to *Lanyue pekinensis* **comb. nov.**

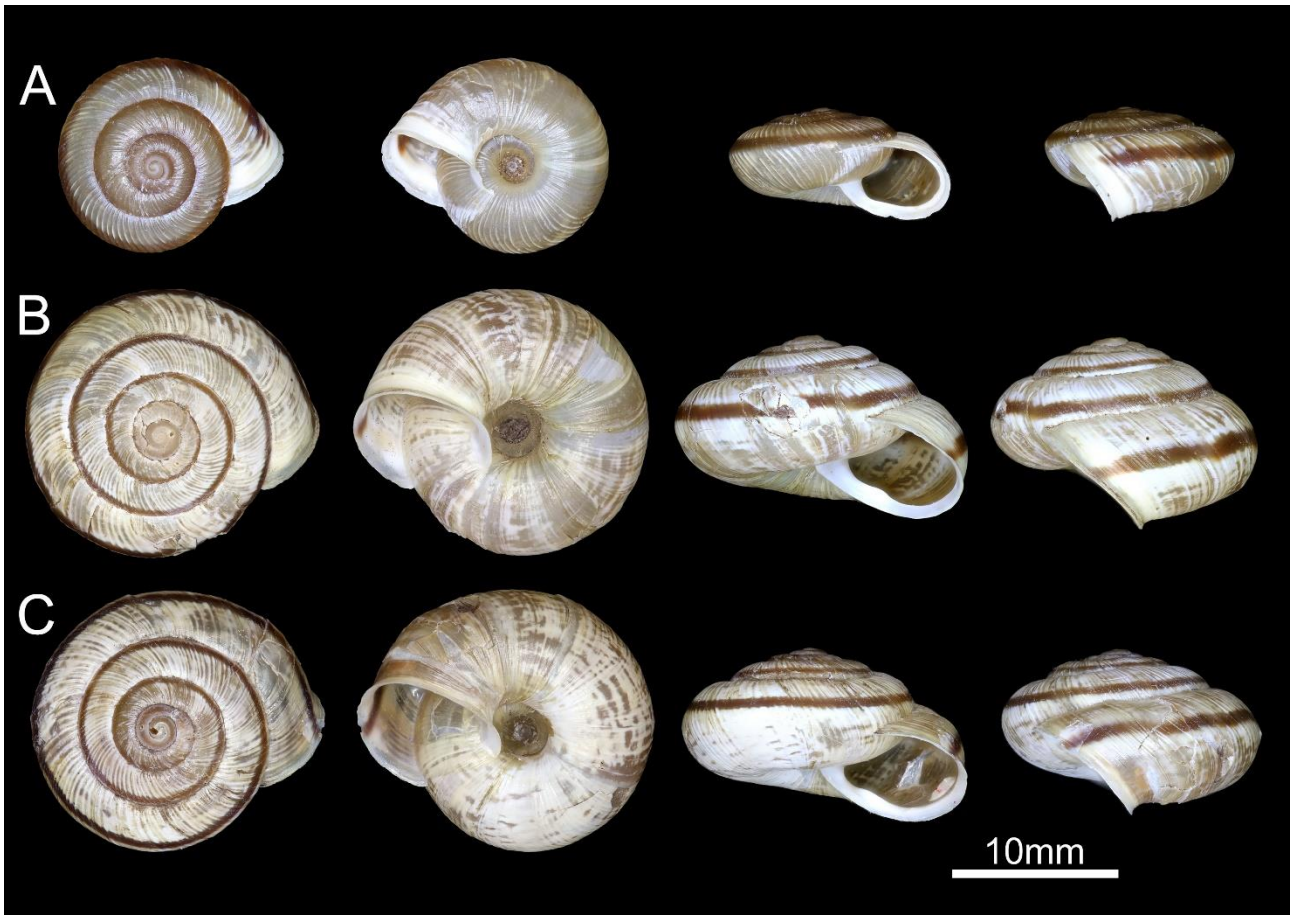

FIGURE 14. *Lanyue* **gen. nov.**: **A** *L. pekinensis* (Deshayes, 1874) **comb. nov. B** *L. yentengchieni* **gen. et sp. nov.** holotype: NCUZZ261501. **C** *L. yentengchieni* **gen. et sp. nov.** paratype: NCUZZ261502.

Lanyue yentengchieni Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan, gen. et sp. nov.
阎氏揽月蜗牛

https://zoobank.org/3CE3715C-B86D-4CF8-ACD1-69C6A0644DF6

Fig. 14B, C

Type materials. Holotype. NCUZZ261501 (Fig. 14B), Yuxiang Town [虞乡镇], Yongji City [永济市], Yuncheng City [运城市], Shanxi Province [山西省], China, 34°47'N, 110°37'E, 1700 m above sea level, leg. Zhi-Yao Wang & Quan-Yu Zhang, 21 June 2025. Paratypes. NCUZZ261502-11 (10 specimens) (Fig. 14C), WZY20250621Ba (20 specimens).

Etymology. The species is dedicated to Mr. Teng-Chien Yen, one of the earliest Chinese malacologists working on land snail taxonomy, in recognition of his contributions to terrestrial malacology in China.

Description. *Shell* (Fig. 14B, C) ovate-conic, very thin, fragile. Spire slightly low. Whorls convex. Suture impressed. Umbilicus broad, approximately 1/5 of diameter, protoconch visible through umbilicus. Shell gently transitioning into umbilicus. Columella oblique. Columellar lip dilated, slightly covering umbilicus. Spiral furrows present. Growth lines indistinct. Both young and adult shells smooth and rounded. Body whorl basally convex, not strongly inflated, final part scarcely descending. Aperture semilunar, internally with indistinct ring-like thickening; with small basal tooth near columella. Peristome narrowly expanded, strongly oblique, slightly sinuate, not continuous. Parietal callus indistinct. Shell glossy, pale yellow, surface with dense, irregular white transverse streaks and a few discontinuous spiral streaks. One narrow reddish-brown bands above periphery. Peristome white.

Measurements (n = 5): Shell width: 16.7–17.7 mm; shell height: 10.3–11.7 mm.

Distribution. China: Shanxi. This new species is known only from the type locality.

Ecology. *Lanyue yentengchieni* **sp. nov.** inhabits humid, cold limestone cliff crevices with dense vegetation at high-altitude.

Remarks. *Lanyue yentengchieni* **sp. nov.** can be distinguished from *L. pekinensis* **comb. nov.** by its larger shell size, higher spire, relatively narrower umbilicus, and densely irregular white streaks on the shell surface.

Genus *Xianqiong* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan gen. nov.
纤琼螺属

https://zoobank.org/DD987F05-0D65-4E48-8DA0-BF7F11BBE8D1

Type species. *Xianqiong zangqiang* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan, **gen. et sp. nov.**

Etymology. The generic name 'Xianqiong' is derived from a classical Chinese phrase, referring to delicate and beautiful small objects, alluding to the small size and exquisite shell morphology of species in this genus.

Diagnosis. Shell low conoid, thin, dextral. Spire very low. Whorls convex, suture deep. Umbilicus broad. Shell gently transitioning into umbilicus. Columellar lip dilated, slightly covering umbilicus. Spiral furrows absent. Growth lines indistinct. Teleoconch with dense and distinct ribs. Both young and adult shells smooth and keeled, partial detachment of body whorl from penultimate whorl. Body whorl convex basally. Peristome expanded, oblique, continuous. Shell dull.

Differential diagnosis. *Xianqiong* **gen. nov.** is not closely similar to any known genus. It can be distinguished from all known genera by its low spire, distinct ribs, prominent keel, and partial detachment of body whorl from penultimate whorl.

Xianqiong zangqiang Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan, gen. et sp. nov.
藏羌纤琼螺

https://zoobank.org/0C743B4A-8FC4-4B95-A85E-A624616AB415

Fig. 15A–C

Type materials. Holotype. NCUZZ261601 (Fig. 15A), Danba County [丹巴县], Aba Tibetan and Qiang Autonomous Prefecture [阿坝藏族羌族自治州], Sichuan Province [四川省], China, 30°52'N, 101°53'E, 2300 m above sea level, leg. Zhi-Yao Wang & Quan-Yu Zhang, 11 May 2026. Paratypes. NCUZZ261602-05 (4 specimens) (Fig. 15B, C), WZY20260511Fa (10 specimens).

Etymology. The species is named after both the Tibetan and Qiang peoples, as its distribution area is located within a region of cultural interaction between Tibetan and Qiang communities.

Description. *Shell* (Fig. 15A–C) dextral, very thin, low conoid. Spire very low. Whorls convex, suture deep. Umbilicus broad, about one-third of body-whorl diameter. Shell gently transitioning into umbilicus. Columellar lip dilated, slightly covering umbilicus. Spiral furrows absent. Growth lines indistinct. Teleoconch with dense and distinct ribs. Both young and adult shells smooth and keeled, constricted above and below keel. Body whorl basally convex; last one-fifth detached from penultimate whorl; distance between aperture and penultimate whorl approximately equal to width of one whorl. Columellar lip of detached part forming a ridge. Aperture ovate, without ring-like thickening or teeth. Peristome expanded but not reflected, oblique, slightly sinuate, continuous. Shell dull, with light yellowish-brown ground color; ribs white; dorsal side of shell with two indistinct bands, one situated in constricted area above keel, the other situated slightly below suture, along middle part of ribs; mantle black, shell appearing dark gray in living individuals.

Measurements (n = 5): Shell width: 5.1–6 mm; shell height: 2.6–2.8 mm.

Distribution. China: Sichuan. This new species is known only from the type locality.

Ecology. *Xianqiong zangqiang* **gen. et sp. nov.** inhabits cliffs on both sides of limestone river valleys.

Genus *Baocha* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan gen. nov.
宝刹蜗牛属

https://zoobank.org/2804DF48-8827-4D84-AF05-D337E12B6E50

Type species. *Baocha strophostomus* (Möllendorff, 1899), **comb. nov.** (Fig. 15D).

Etymology. The generic name ‘Baocha’ is derived from the Chinese term for a Buddhist pagoda, referring to the solid and elevated shell of the type species.

Diagnosis. Shell conic, thin, dextral. Spire high. Whorls flattish, lightly convex below suture. Suture superficial. Umbilicus narrow. Shell gently transitioning into umbilicus. Columellar lip dilated, partially covering umbilicus. Spiral furrows absent. Growth lines indistinct. Both young and adult shells smooth and angulate below periphery. Body whorl indistinctly convex basally, abruptly descending in front, periphery slightly constricted near aperture; with a indistinct tooth near columella. Peristome expanded, oblique, continuous. Parietal callus distinct. Shell glossy, brown, unbanded.

Differential diagnosis. *Baocha* **gen. nov.** is not closely similar to any known genus. It can be readily distinguished from its original combination, *Pseudiberus*, by its markedly smaller, more elevated shell and the greater number of whorls.

Baocha strophostomus (Möllendorff, 1899), comb. nov.
扭口宝刹蜗牛

Fig. 15D

Material. Type specimen. NCUZZ261701 (Fig. 15D), Shijiba Town [石鸡坝镇], Wenxian County [文县], Longnan City [陇南市], Gansu Province [甘肃省], China, 33°03'N, 104°26'E, 1200 m above sea level, leg. Zhi-Yao Wang & Quan-Yu Zhang, 4 July 2025.

Redescription. *Shell* (Fig. 15D) conic, thin, solid. Spire high. Whorls flattish, lightly convex below suture.

Suture superficial. Umbilicus narrow. Shell gently transitioning into umbilicus. Columella oblique. Columellar lip dilated, partially covering umbilicus. Spiral furrows absent. Growth lines indistinct. Both young and adult shells smooth and angulate below periphery. Body whorl indistinctly convex basally, abruptly descending in front, detached from penultimate whorl near aperture and penultimate whorl approximately equal to width of one whorl; periphery slightly constricted near aperture, extending for approximately one-quarter of body whorl. Aperture elongate ovate, internally without ring-like thickening; with a indistinct tooth near columella. Peristome expanded, oblique, continuous. Parietal callus distinct. Shell glossy, brown, unbanded.

Measurements: Shell width: 4.4 mm; shell height: 5.6 mm.

Distribution. China: Gansu. This new species is known only from the type locality.

Ecology. *Baocha strophostomus* **comb. nov.**inhabits high-altitude limestone scree.

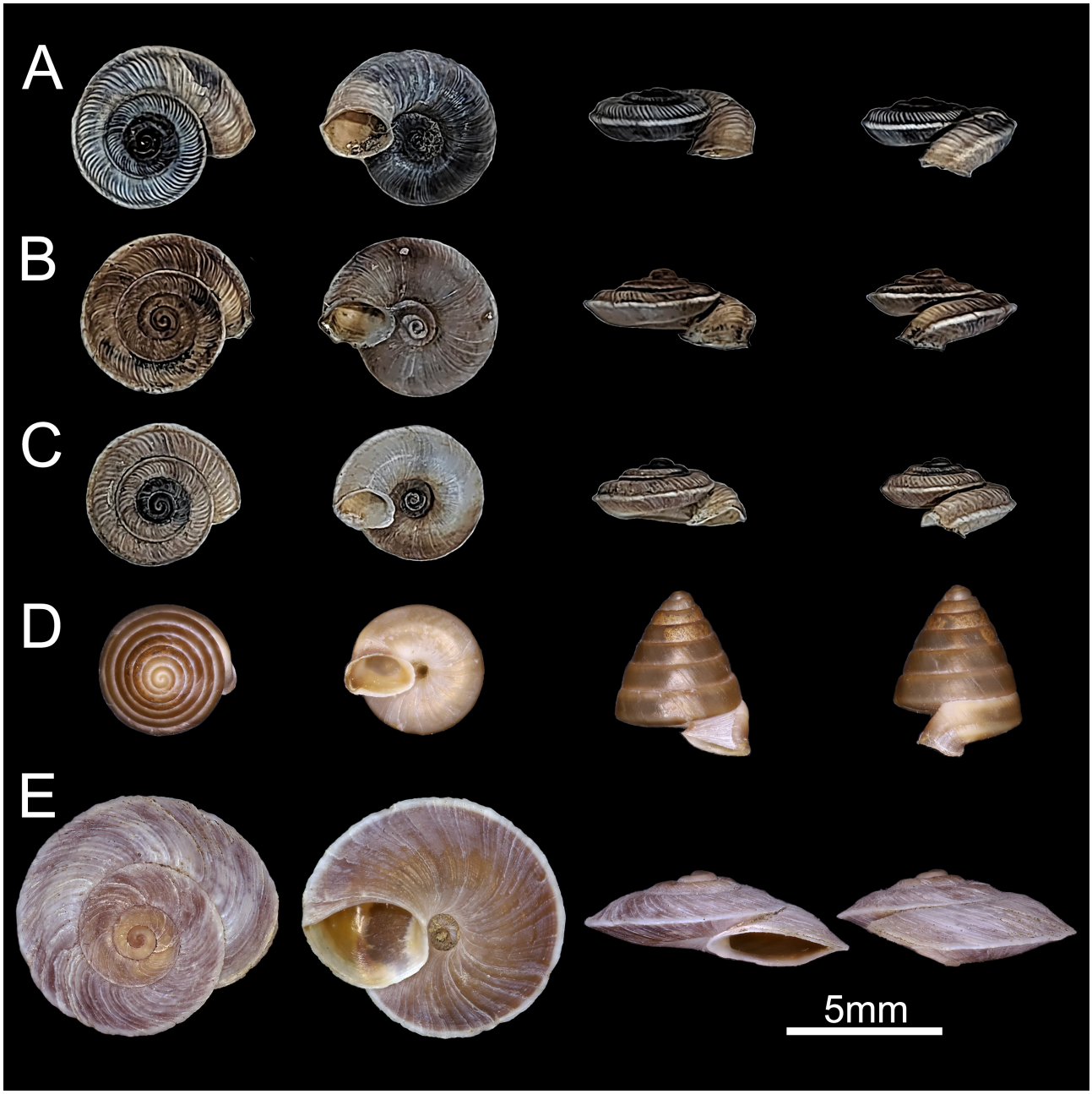

FIGURE 15. *Xianqiong zangqiang* **gen. et sp. nov.** and other new combinations: **A** *Xianqiong zangqiang* **gen. et sp. nov.** holotype: NCUZZ261601. **B, C** *Xianqiong zangqiang* **gen. et sp. nov.** paratypes: NCUZZ261602-03. **D** *Baocha strophostomus* (Möllendorff, 1899) **comb. nov. E** *Meteoritella liuae* (Wu, 2017) **comb. nov.**

Genus *Meteoritella* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan gen. nov.
陨星蜗牛属

https://zoobank.org/5CE9AD21-C1C9-4054-8914-AEB903C436A4

Type species. *Meteoritella liuae* (Wu, 2017), **comb. nov.** (Fig. 15E).

Etymology. The generic name 'Meteoritella' is derived from "meteorite", referring to the small-sized, rock-dwelling habit of the type species and its dark, rough shell resembling meteorite crater.

Diagnosis. Shell extremely depressed, lens-shaped, thin, dextral. Spire low. Whorls flattish. Suture superficial. Umbilicus broad. Shell gently transitioning into umbilicus. Columellar lip dilated, partially covering umbilicus. Protoconch finely granulated. Spiral furrows ventral. Growth lines distinct. Both young and adult shells smooth and keeled; keel projecting and forming sharply carinate, slightly sawtoothed. Body whorl indistinctly convex basally. Aperture peach-shaped, internally without ring-like thickening. Peristome slightly expanded below, oblique, continuous. Parietal callus distinct. Shell dull, unbanded.

Differential diagnosis. Although *Meteoritella* **gen. nov.** is morphologically similar to *Pseudiberus*, it can be clearly distinguished by its whorl number and genital anatomy.

Meteoritella liuae (Wu, 2017), comb. nov.
刘氏陨星蜗牛

Fig. 15E

Material. Type specimen. NCUZZ261801 (Fig. 15E), Shijiba Town [石鸡坝镇], Wenxian County [文县], Longnan City [陇南市], Gansu Province [甘肃省], China, 33°06'N, 104°20'E, 1190 m above sea level, leg. Zhi-Yao Wang & Quan-Yu Zhang, 4 July 2025.

Redescription. *Shell* (Fig. 15E) extremely depressed and lensshaped; thin; dextral. Suture superficial. Umbilicus broad. Columellar lip dilated; partially covering umbilicus. Protoconch finely granulated. Spiral furrows present and clearly visible on the base. Growth lines distinct. Both young and adult shells smooth and keeled; keel projecting and forming sharply carinate, slightly sawtoothed. Body whorl indistinctly convex basally. Body whorl indistinctly convex basally. Aperture peach-shaped, internally without ring-like thickening. Peristome slightly expanded below, oblique, continuous. Parietal callus distinct. Shell dull, reddish-brown with white carinate and lighter umbilical region, unbanded.

Measurements: Shell width: 8.4 mm; shell height: 3.1 mm.

Distribution. China: Gansu. This new species is known only from the type locality.

Ecology. *Meteoritella liuae* **comb. nov.**inhabits high-altitude cliff.

Discussion

Taxonomic revision

Although classifications relying solely on shell morphology have been questioned by recent molecular studies, the present study, based on extensive field sampling and detailed observations and supported by available morphological evidence, describes four new species with distinctive shell characters: *C. danqin* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan **sp. nov.**, *C. luli* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan **sp. nov.**, *C. fengquanensis* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan **sp. nov.** & *C. fenglingae* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan **sp. nov.** Based on significant anatomical and ecological differences, together with phylogenetic evidence, we reinstate four synonymized taxa of *Cathaica* as valid species: *C. mengi* Yen, 1935 **sp. restit.**, *C. sculptilis*Z.-Y. Wang, Y.-M. He, H. Chen & Q.-Y. Zhang, 2025 **sp. restit.**, *C. zhangcunxiangi*Z.-Y. Wang, Y.-M. He, H. Chen & Q.-Y. Zhang, 2025 **sp. restit.**, *C. wangjiaxunae* Z.-Y. Wang, Y.-M. He, H. Chen & Q.-Y. Zhang,

2025 **sp. restit.**

Pseudiberus Ancey, 1887 was originally established based on shell morphology and currently comprises approximately 30 species and subspecies (Wu 2002; Wu & Qi 2006; Ramakrishna & Dey 2010; Wu & Asami 2017; Chen *et al.* 2025c). Based on available morphological evidence, the present study describes five new species from the Taihang Mountains, significantly enriching the known diversity of the genus: *Pseudiberus rupiconditus* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan **sp. nov.**, *P. cangwei* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan **sp. nov.**, *P. zhongtiaoensis* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan **sp. nov.**, *P. weijieae* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan **sp. nov.** & *P. daiwenhaoi* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan **sp. nov.**

Laeocathaica Möllendorff, 1899 currently comprises approximately 30 species, with a distribution in central China, including western Hubei, Chongqing, Sichuan, southern Gansu, and western Shaanxi (Wu & Chen 1998; Páll-Gergely *et al.* 2022). The genus is characterized by sinistral shells with a spire ranging from conical to markedly low, usually with a sharp carina, an aperture that is more or less reflexed, a broad umbilicus, and weak to prominent apertural barriers on juvenile shells. Based on notable differences in shell morphology, this study describes three new species of the genus: *L. jiyin* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan **sp. nov.**, *L. chensha* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan **sp. nov.**, and *L. yuhuan* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan **sp. nov.**

Metodontia Möllendorff, 1886 is considered one of the more ancient lineages within the Bradybaenidae (Wu 1999), and its distribution indicates that it is endemic to the loess regions of northern and northwestern China (Wu 2006). Based on shell morphology, the present study describes a new species with distinctive shell characters: *Metodontia carinata* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan **sp. nov.**

Lanyue pekinensis (Deshayes, 1874) **comb. nov.**, has long been assigned to *Cathaica*. Based on extensive field sampling and observations, as well as preliminary comparative studies of the genital anatomy, this species is found to differ markedly from *Cathaica* in ecological habits, shell morphology, and reproductive anatomy. Accordingly, a new genus, *Lanyue* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan, **gen. nov.**, is herein established with *L. pekinensis* **comb. nov.** designated as the type species. In addition, a new species, *Lanyue yentengchieni* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan **gen. et sp. nov.**, is described.

Xianqiong zangqiang Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan **gen. et sp. nov.** is a species with highly distinctive morphology, and no closely related species have been identified to date. Accordingly, a new genus, *Xianqiang* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan **gen. nov.**, is established, with *X. zangqiang* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan **gen. et sp. nov.** designated as the type species.

Since *Pseudiberus* Ancey, 1887 and *Platypetasus* Pilsbry, 1895 were synonymized by Wu & Qi (2006), *Meteoritella liuae* (Wu, 2017) **comb. nov.** and *Baocha strophostomus* (Möllendorff, 1899) **comb. nov.** have long been assigned to *Pseudiberus*. However, both exhibit distinctive shell characters that clearly distinguish them from the genus. Moreover, available phylogenetic evidence supports their recognition as independent lineages. Accordingly, two new genera, *Meteoritella* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan **gen. nov.**, and *Baocha* Z.-Y. Wang, Q.-Y. Zhang, Y.-M. He & Y.-X. Huan **gen. nov.**, are herein established, with *M. liuae* **comb. nov.** and *B. strophostomus* **comb. nov.** designated as their respective type species.

Taxonomic discussion

Comparing newly described species with morphologically similar known taxa to validate taxonomic validity is a fundamental practice in new species documentation. The genus *Cathaica* was originally established based on shell morphology. Although shell-based classification has been questioned in recent years, it is widely acknowledged in taxonomy that closely related species tend to share closer phylogenetic affinities. Hence, comprehensive comparison of shell morphological traits remains essential, which constitutes the core analytical focus of Wang *et al.* 2025.

Terrestrial snails feature low mobility and limited dispersal capacity, and their survival relies heavily on ambient humidity. Their distribution is thus profoundly shaped by climatic and geographical conditions. Northern regions are drier, colder and subject to erratic precipitation compared with southern areas. As a genus predominantly distributed across North China, geographic distribution exerts a non-negligible influence on the phylogenetic relationships of *Cathaica* species. This viewpoint is also supported by extensive field sampling experience accumulated by the authors. Accordingly, geographic distribution deserves due consideration in taxonomic analysis.

While Wang *et al.* 2025 conducted thorough comparisons of morphological characteristics and geographic ranges among allied species, they also provided detailed genital anatomical and molecular phylogenetic evidence. Nevertheless, Zhang & Wu 2026 claimed that excessive emphasis was placed on shell ribs and geographic distribution as diagnostic criteria. Such deliberate disregard of comprehensive research findings is evidently biased. *Cathaica mengi*, *C. sculptilis*, *C. zhangcunxiangi* and *C. wangjiaxunae* all possess distinctive genital traits and form robust monophyletic lineages in phylogenetic reconstruction.

Zhang & Wu 2026 alleged that Wang *et al.* 2025 overlooked two conclusions proposed by Zhang & Wade 2023: first, shell morphology carries low phylogenetic informative value for most *Cathaica* species; second, certain genital traits exhibit high variability among closely related congeners. Notably, Zhang & Wade 2023 drew these conclusions merely based on five *Cathaica* species, accounting for less than 10% of the total species diversity of the genus. Their geometric morphometric analysis failed to incorporate sufficient species samples to assess the taxonomic weight of morphological landmarks, and only lateral shell views were adopted for measurement. Dorsal views, ventral views and shell microstructures, all bearing pivotal diagnostic features, were completely omitted. Conclusions derived from insufficient species coverage and flawed morphometric analysis lack persuasiveness and universal applicability.

Regarding geographic distribution, specimens examined by Zhang & Wade 2023 to verify the validity of *C. pyrrhozona* were not collected from its type locality in Shanghai. They sequenced specimens morphologically resembling *C. fasciola* from Shandong Province and hastily assigned them to *C. pyrrhozona* based on divergent phylogenetic clustering. Two tested *C. fasciola* specimens originated from Anhui Province, situated geographically between Shanghai and Shandong. Such non-rigorous taxonomic handling undermines the credibility of the corresponding conclusions.

Zhang & Wu 2026 noted a sac-like structure near the genital atrium in the genital illustration of *C. mengi* presented by Wang *et al.* 2025 and identified it as the proximal accessory sac. However, abundant anatomical examinations conducted by one of the authors confirm that this structure does not conform to the morphological definition of a typical proximal accessory sac. The protuberance has a large open aperture inside the genital cavity and lacks the parallel septa characteristic of standard proximal accessory sacs (Fig. 16B). It is more likely a muscular fold formed by cavity dilation rather than a genuine accessory sac. This structure may serve as a functional substitute after the degeneration of the original proximal accessory sac. For rigorous morphological description, Wang *et al.* 2025 refrained from classifying it as a standard proximal accessory sac.

Comparative anatomical analysis reveals conspicuous errors in the genital structural interpretation of *Cathaica* species by Zhang & Wade 2023. Their schematic illustration depicts disconnected apertures between the mucous gland and proximal accessory sac. In fact, all examined *Cathaica* species except *C. mengi* possess interconnected openings of these two structures, for example *C. zhangcunxiangi* (Fig. 16A). This fundamental error indicates inadequate anatomical proficiency and comprehension.

Zhang & Wade 2023 documented intraspecific variations of mucous glands in *C. fasciola* and *C. pyrrhozona*. Accordingly, Zhang & Wu 2026 argued that mucous gland curvature cannot serve as a valid taxonomic character, yet no photographic evidence was provided to support this claim.

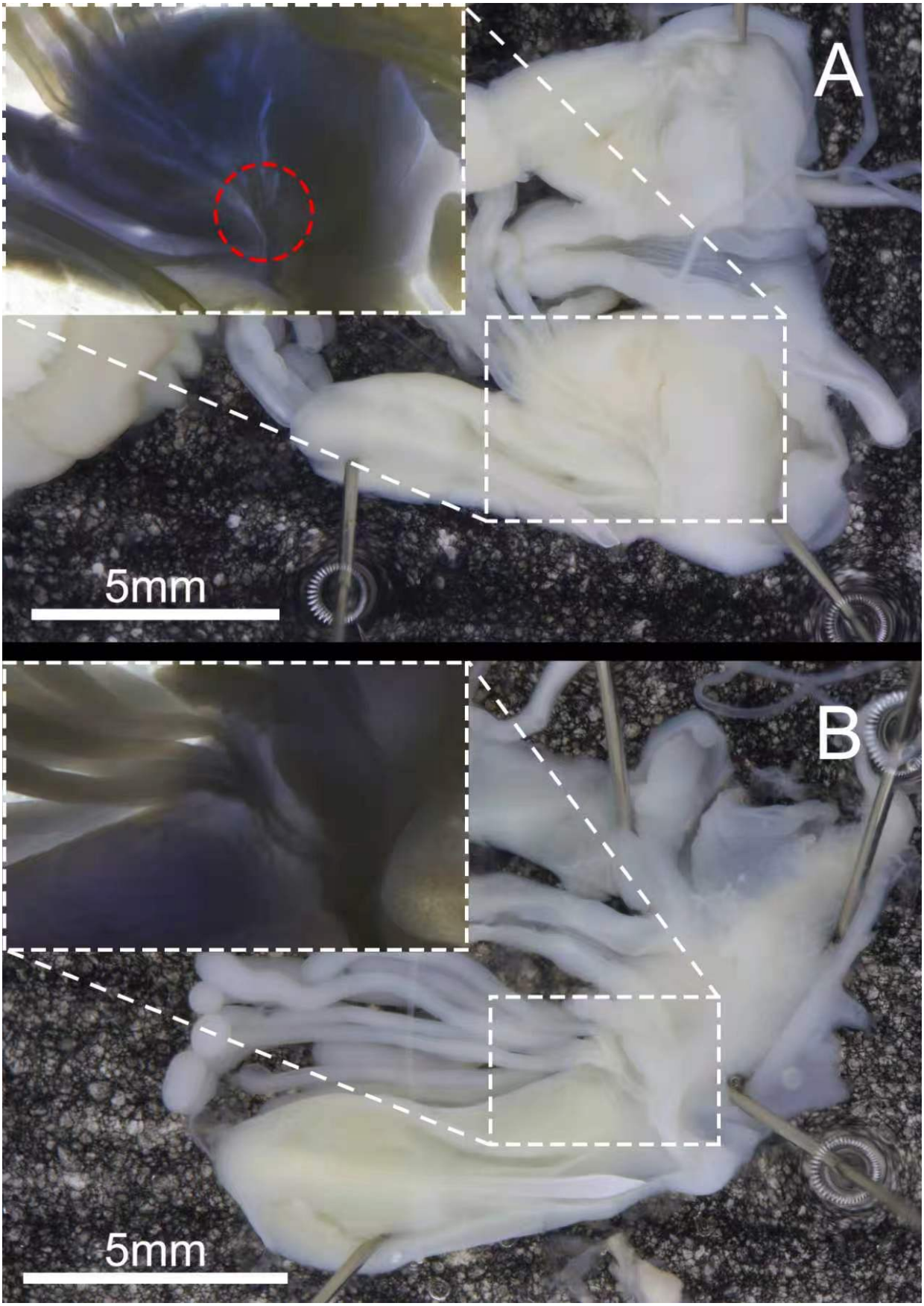

FIGURE 16. Schematic diagrams of the genitalia of *Cathaica* species: **A** Genitalia of *C. zhangcunxiangi* and a close-up of the entrance(s) of mucous glands. **B** Genitalia of *C. mengi* and a close-up of the entrance(s) of mucous glands. Red circles indicate the entrance(s) of mucous glands extending into the proximal opening of the auxiliary sac.

Academic ethics

Zhang & Wu 2026 regarded double proximal accessory sacs as the diagnostic trait defining *C. fasciola*. Nevertheless, this morphological feature is also observed in the genitalia of *C. qiguo* Z.-Y. Wang, Y.-X. Huan & Q.-Y. Zhang, 2026, previously recorded as *C. sp2* in Wang *et al.* 2025. Phylogenetic results demonstrate that *C. qiguo* forms a sister clade with *C. multicostata* instead of *C. fasciola*, which contradicts the assertion of Zhang & Wu 2026. This species was intentionally excluded from their discussion.

Publications authored by Ms. Zhang reflect persistent attempts to screen diagnostic apomorphic morphological characters. Her research is restricted to a limited number of species with available molecular and anatomical data, and most examined specimens were collected by other researchers. Selective omission of certain species and inaccurate anatomical interpretation prevail in her studies. These drawbacks render her conclusions highly subjective and inconsistent with actual biological facts.

This article aims not only to protect the legitimate rights and interests of its first author, but also to safeguard the legitimate rights and interests of the broader community of taxonomic researchers in the field of taxonomy. If a paper can be published without the knowledge of its co-authors, and if specimens provided by institutions or individuals can be used without prior consultation with the providers, serious academic problems will arise. While constructing an improved taxonomic system for mollusks is certainly worthwhile, this does not justify arrogance on the part of researchers. Extreme caution must be exercised when dealing with taxa that one does not fully understand. Being eager to comment on papers outside one's own field before completing one's own research (Zhang 2025) is not necessarily harmful, but such constructive criticism must be offered with great care. At the same time, as researchers in the natural sciences, we must recognize that the systems we establish are not necessarily superior. In taxonomy, research typically relies on physical specimens of species, making it crucial to respect co-authors who contribute biological material. While Ms. Zhang's research methods do exhibit a degree of advancement, whether this justifies her lack of respect for co-authors warrants serious reflection. Furthermore, the significance of taxonomy deserves deeper consideration. Taxonomy is not intended to impose an arbitrary system based on personal preference, but to serve scientific communication, resource conservation, evolutionary research, and related fields. Therefore, when dealing with endemic taxa from different countries, the above issues must be carefully taken into account.

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Photo Gallery

Pseudophyllus titan White, 1846
Mulu, Borneo
photograph by Tian-Jiao WANG [王天骄]